

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-29 (Canceled)

30. (Currently Amended) Apparatus for manufacturing a fibrous mat comprising a first die source including spaced die orifices capable of feeding a first attenuated multiple fiber layered portion; a first selectively gap spaced longitudinally extending first rotating collector surface to receive said first layered portion; a spaced second die source including spaced die orifices capable of feeding a second attenuating multiple fiber layered portion; a second gap spaced longitudinally extending second similarly rotating collector surface to receive said second fiber layered portion, said second rotating collector surface being spaced from said first rotating collector surface; and transfer and orientation means positioned between said first and second collector surfaces to orient and transfer said first layered mat portion from said first rotating collector surface to said second similarly rotating collector surface.

31. (Original) The apparatus for manufacturing a fibrous mat of Claim 30, and at least one layered mat diverting apparatus positioned externally of one of said die sources to apply an external vortically creating force on part of one of said fiber layered portions before said portion reaches said cooperative rotating collecting source for said layered portion.

32. (Currently Amended) Apparatus for manufacturing a fiber filter mat comprising: a first melt blown die source including spaced die orifices capable of feeding a first attenuated multiple filter fiber layer portion; a first longitudinally extending rotatable collector surface spaced from and aligned with said first die source to eventually receive said first attenuated filter fiber portion; a spaced second melt blown die source including spaced die orifices capable of feeding a second attenuated multiple filter fiber portion; a second longitudinally extending similarly rotatable collector surface spaced from and aligned with said second die source to receive said second attenuated filter fiber portion, said first die source and said aligned first rotatable collector being spaced from said second die source and said aligned second similarly rotatable collector; a plurality of spaced longitudinally extending idler rolls positioned between said first and second rotatable collectors to orient and transfer said first layered mat portion from said first rotatable collector surface from a first selected cross-sectional quadrant to a second selected cross-sectional quadrant of said second similarly rotatable collector surface; and at least one small collector diverter positioned in spaced relation to one of said die sources to apply an external vortically creating force to part of one of said fiber layered portions before said portion reaches said cooperative rotatable collector collecting surface for said portion, and, an additional work station positioned downstream said second rotatable collector to receive combined first and second mat portions.

33. (Previously Presented) Apparatus for manufacturing a fiber filter mat comprising:
at least two spaced successive melt blown die sources wherein each of said at least two spaced successive melt blown die sources have at least one spaced die orifice;

at least two longitudinally extending cylindrical rotatable collectors wherein one of said at least two longitudinally extending cylindrical rotatable collectors is aligned and selectively spaced from each of said at least two spaced successive melt blown die sources; a motor and gear driven system in mechanical communication with each of said at least two longitudinally extending cylindrical rotatable collectors providing a rotational force to each of said at least two longitudinally extending cylindrical rotatable collectors; and at least one longitudinally extending idler roller, wherein at least one of said at least one longitudinally extending idler roller is positioned between each of said at least two longitudinally extending cylindrical rotatable collectors.

34. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein each of said at least two longitudinally extending cylindrical rotatable collectors has a perforated collector surface.

35. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 34 wherein each of said at least two longitudinally extending cylindrical rotatable collectors has a vacuum source in flow communication thereto.

36. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein each of said at least two longitudinally extending cylindrical rotatable collectors has an internal coolant.

37. (Currently Amended) The apparatus for manufacturing a fiber filter mat of Claim 33 further having a vortically force creating rotational cylindrical drum gap-spaced at preselected distance from at least one of said at least two longitudinally extending cylindrical rotatable

collectors, said vortically force creating rotational cylindrical drum having a motor and gear driven system in mechanical communication thereto providing a rotational force in an opposite direction as said rotational force being applied to the said at least one two longitudinally extending cylindrical rotatable collector to which said vortically force creating rotational cylindrical drum is gap-spaced therefrom.

38. (Currently Amended) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein said at least one of said at least one longitudinally extending idler rollers positioned between each of said at least two longitudinally extending cylindrical rotatable collectors[.] is three idler rollers arranged in a substantially triangular configuration.

39. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein each of said at least two longitudinally extending cylindrical rotatable collectors being aligned and selectively spaced from each of said at least two spaced successive melt blown die sources are selectively spaced approximately in a range of 2 to 60 inches.

40. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 39 wherein each of said at least two longitudinally extending cylindrical rotatable collectors being aligned and selectively spaced from each of said at least two spaced successive melt blown die sources are selectively spaced at approximately 18 inches.

41. (Currently Amended) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein each of said at least two spaced successive melt blown die sources is aligned above a first cross-sectional quadrant, between 0° and 90°, of each of said at least two longitudinally

extending cylindrical rotatable collectors and each of said at least two longitudinally extending cylindrical rotatable collectors have said rotational force applied thereto in a common direction.

42. (Currently Amended) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein a first of said at least two spaced successive melt blown die sources is aligned above a fourth cross-sectional quadrant, between 270° and 360°, of a first of said at least two longitudinally extending cylindrical rotatable collectors and a second of said at least two spaced successive melt blown die sources is aligned above a first cross-sectional quadrant, between 0° and 90°, of a second of said at least two longitudinally extending cylindrical rotatable collectors, ~~said first and said second longitudinally extending cylindrical rotatable collectors have said rotational force applied thereto in an opposite direction.~~

43. (Currently Amended) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein a first of said at least two spaced successive melt blown die sources is aligned above a first cross-sectional quadrant, between 0° and 90°, of a first of said at least two longitudinally extending cylindrical rotatable collectors and a second of said at least two spaced successive melt blown die sources is aligned above a fourth cross-sectional quadrant, between 270° and 360°, of a second of said at least two longitudinally extending cylindrical rotatable collectors, ~~said first and said second longitudinally extending cylindrical rotatable collectors have said rotational force applied thereto in a common direction.~~

44. (Currently Amended) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein a first of said at least two spaced successive melt blown die sources is aligned above a fourth first cross-sectional quadrant, between 270° and 360°, of a first of said at least two

longitudinally extending cylindrical rotatable collectors and a second of said at least two spaced successive melt blown die sources is aligned above a fourth ~~first~~ cross-sectional quadrant, between 270° and 360°, of a second of said at least two longitudinally extending cylindrical rotatable collectors, ~~said first and said second longitudinally extending cylindrical rotatable collectors have said rotational force applied thereto in an opposite direction.~~

45. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 33 wherein a work station is positioned downstream from a final of said at least two longitudinally extending cylindrical rotatable collectors.

46. (Previously Presented) An apparatus for manufacturing a fiber filter mat comprising:
a first and second cylindrical rotatable collector having cylindrical axes substantially horizontally aligned and having a space there between;
a first and second die source, said first die source being positioned above said first rotatable collector and said second die source being positioned above said second rotatable collector; and

at least one cylindrical rotatable idler roller having a cylindrical axis substantially horizontally aligned below said cylindrical axes of said first and second cylindrical rotatable collectors and having a cylindrical surface between cylindrical surfaces of said first and second cylindrical rotatable collectors.

47. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 46 wherein said first and second cylindrical rotatable collectors have vacuum source and perforated cylindrical surfaces.

48. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 46 wherein said first and second cylindrical rotatable collectors have a cooling source.

49. (Previously Presented) The apparatus for manufacturing a fiber filter mat of Claim 46 wherein said first and second cylindrical rotatable collectors are respectively spaced below said first and second die sources in a range of approximately two to sixty inches.